WHAT IS CLAIMED IS:

1. A distributed simulation system comprising a plurality of nodes, wherein each node of the plurality of nodes is configured to simulate a different portion of a system under test using a simulator program configured to perform a simulation as a series of timesteps, and wherein each timestep includes at least a first phase and a second phase, and wherein each node of the plurality of nodes is configured not to cause the simulator program to evaluate a model of the different portion of the system under test during the first phase even if one or more commands are received by that node during the first phase, and wherein each node of the plurality of nodes is configured to cause the simulator program to evaluate the model during the second phase in response to receiving a command including one or more signal values for signals of the model.

2. The distributed simulation system as recited in claim 1 wherein each node of the plurality of nodes is configured not to cause the simulator program to evaluate the model during the second phase if the signal values in the command received by that node are the same as the current values of the signals.

3. The distributed simulation system as recited in claim 1 wherein each node of the plurality of nodes is configured, if one or more output signals of the model change in response to evaluating the model, to transmit a command including at least the signal values of the output signals that change.

4. The distributed simulation system as recited in claim 1 wherein each node of the plurality of nodes is configured to cause the simulator program to evaluate the model two or more times during the second phase in response to two or more commands including signal values.

5. The distributed simulation system as recited in claim 1 further comprising a hub

coupled to the plurality of nodes, wherein the hub is configured to receive at least one command from each node during the first phase prior to transmitting commands to the plurality of nodes during the first phase.

6. The distributed simulation system as recited in claim 5 wherein each node of the plurality of nodes is configured to transmit a no-operation command to the hub if that node has no other command to transmit.

7. The distributed simulation system as recited in claim 5 wherein the hub is configured to transmit at least one command to each node of the plurality of nodes.

8. The distributed simulation system as recited in claim 7 wherein a first command transmitted by the hub to a first node of the plurality of nodes corresponds to a second command received from one of the plurality of nodes if the second command is routed to the first node, and wherein the first command is a no-operation command otherwise.

9. The distributed simulation system as recited in claim 1 further comprising a hub coupled to the plurality of nodes, wherein the hub is configured to receive at least one command from each node during the second phase prior to transmitting commands to the plurality of nodes during the second phase.

10. The distributed simulation system as recited in claim 9 wherein each node of the plurality of nodes is configured to transmit a no-operation command to the hub if that node has no other command to transmit.

11. The distributed simulation system as recited in claim 9 wherein the hub is configured to transmit at least one command to each node of the plurality of nodes.

12. The distributed simulation system as recited in claim 11 wherein a first command

transmitted by the hub to a first node of the plurality of nodes corresponds to a second command received from one of the plurality of nodes if the second command is routed to the first node, and wherein the first command is a no-operation command otherwise.

13. The distributed simulation system as recited in claim 1 further comprising a hub coupled to the plurality of nodes and configured to signal an end of each of the first phase and the second phase.

14. The distributed simulation system as recited in claim 13 wherein the hub is configured to receive at least one command from each node prior to transmitting commands to the plurality of nodes, and wherein the hub is configured to signal an end to one of the first phase or the second phase responsive to receiving a no-operation command from each of the plurality of nodes.

15. A carrier medium comprising instructions which, when executed, process a first one or more commands received during a first phase of a timestep without causing a simulator program to evaluate a model, and cause the simulator program to evaluate the model during a second phase of the timestep in response to receiving a second command including one or more signal values for signals of the model.

16. The carrier medium as recited in claim 15 wherein the instructions, when executed, do not cause the simulator program to evaluate the model during the second phase if the signal values in the second command are the same as the current values of the signals in the model.

17. The carrier medium as recited in claim 15 wherein the instructions, when executed, if one or more output signals of the model change in response to evaluating the model, transmit a command including at least the signal values of the output signals that change.

18. The carrier medium as recited in claim 17 wherein the instructions, when executed, if no output signals change value during the second phase, transmit a no-operation command.

19. The carrier medium as recited in claim 15 wherein the instructions, when executed, cause the simulator program to evaluate the model two or more times during the second phase in response to two or more commands including signal values and optional signal strengths.

20. The carrier medium as recited in claim 15 wherein, in response to a third command indicating an end of the first or second phase, is configured to return to the simulator program.

21. A carrier medium comprising instructions which, when executed, are configured to signal an end of either a first phase or a second phase of a timestep in a distributed simulation system by transmitting a predefined command indicating an end of the first phase or the second phase to each of a plurality of nodes in the distributed simulation system.

22. The carrier medium as recited in claim 21 wherein the instructions are configured to signal the end of either the first phase or the second phase responsive to receiving a no-operation packet from each of the plurality of nodes subsequent to transmitting a command other than a no-operation packet to at least one of the plurality of nodes.

23. The carrier medium as recited in claim 21 wherein the instructions route commands from one of the plurality of nodes to others of the plurality of nodes.

24. A method comprising:

receiving a first one or more commands in a node of a distributed simulation system during a first phase of a timestep;

processing the first one or more commands without causing a simulator program to evaluate a model;

receiving a second command during a second phase of the timestep; and

processing the second command including causing the simulator program to evaluate the model if the second command includes one or more signal values for signals of the model.

25. The method as recited in claim 24 wherein processing the second command does not include causing the simulator program to evaluate the model if the signal values in the second command are the same as the current values of the signals in the model.

26. The method as recited in claim 24 further comprising, if the evaluation of the model during the second phase results in one or more output signals of the model changing, transmitting a command including at least the signal values of the output signals that change.

27. The method as recited in claim 26 further comprising, if no output signals change value during the second phase, transmitting a no-operation command.

28. The method as recited in claim 24 further comprising causing the simulator program to evaluate the model two or more times during the second phase in response to two or more commands including signal values.

29. The method as recited in claim 24 further comprising, in response to a command

indicating an end of the first or second phase, returning to the simulator program.

30. A method comprising:

signaling an end of a first phase of a timestep in a distributed simulation system by a hub of the distributed simulation system, the signaling including transmitting a predefined command to each of a plurality of nodes in the distributed simulation system; and

signaling an end of a second phase of a timestep in a distributed simulation system by the hub, the signaling including transmitting a predefined command to each of the plurality of nodes in the distributed simulation system.

31. The method as recited in claim 30 wherein signaling the end of the first phase is responsive to receiving a no-operation packet from each of the plurality of nodes subsequent to transmitting a command other than a no-operation packet to at least one of the plurality of nodes.

32. The method as recited in claim 30 wherein signaling the end of the second phase is responsive to receiving a no-operation packet from each of the plurality of nodes subsequent to transmitting a command other than a no-operation packet to at least one of the plurality of nodes.

33. A distributed simulation system comprising a plurality of nodes wherein each node of the plurality of nodes is configured to simulate a different portion of a system under test using a simulator program configured to perform a simulation as a series of timesteps, and wherein the plurality of nodes are configured to communicate using commands, and a first node of the plurality of nodes is configured to cause the simulator program to evaluate the model in response to receiving a first command including one or more signal

values for signals of the model during a first timestep, and wherein the first node is configured to cause the simulator program to re-evaluate the model in response to receiving a second command including one or more signal values for signals of the model during the first timestep.

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